

Board Meeting  
April 16-17, 2002

Agenda Item  
Attachment 2a

## STATE OF CALIFORNIA

## CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD

## Base Year Modification Request Certification

## Part 1: Generation Study - No Extrapolation Diversion Data

To request a substitution for a previously approved base-year used in calculating the diversion rate for your jurisdiction, please complete and sign this form and return it to your Office of Local Assistance (OLA) representative at the address below, along with any additional information requested by OLA staff. When all documentation has been received, your OLA representative will work with you to prepare for your appearance before the Board. If you have any questions about this process, please call (916) 341-6199 to be connected to your OLA representative.

2001

Mail completed documents to:

California Integrated Waste Management Board  
Office of Local Assistance  
1001 I Street, 9th Floor  
PO Box 4025  
Sacramento, CA 95812-4025

## General Instructions:

Please select the ONE choice below that best explains your request to the Board.

1. Use a recent generation-based study to calculate our current reporting-year generation amount, but not officially change our existing Board-approved base year.  
 2. Use a recent generation-based study to officially change our existing Board-approved base year to a new base year.

The shaded cells on these sheets are protected. If you have problems using these sheets, please contact your Office of Local Assistance representative.

## Section 1: Jurisdiction Information and Certification

All respondents must complete this section.

I certify under penalty of perjury that the information in this document is true and correct to the best of my knowledge, and that I am authorized to make this certification on behalf of:

Jurisdiction Name <u>City of Adelanto</u>	County <u>San Bernardino</u>		
Authorized Signature 	Title <u>Special Projects Director</u>		
Type/Print Name of Person Signing <u>DAVID CRANDELL</u>	Date <u>11-05-01</u>	Phone ( ) Include Area Code <u>(760) 246-2300 Ext 3034</u>	
Person Completing This Form (please print or type) <u>Rose Institute, Claremont McKenna College - Dr. Steve Frates</u>	Title <u>Project Coordinator (805) 621-8159</u>		
Affiliation: <u>Assisted by Paul Ryan (909) 288-5049 and other staff and students</u>			
Mailing Address <u>11600 Air Base Road</u>	City <u>Adelanto</u>	State <u>CA</u>	ZIP Code <u>92301</u>
E-mail address			

April 16-17, 2002

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APR 17 2002  
SACRAMENTO*

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1. Use a recent generation-based study to calculate our current reporting-year generation amount, but not officially change our existing Board-approved base year.  
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**Section I: Jurisdiction Information and Certification**

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I certify under penalty of perjury that the information in this document is true and correct to the best of my knowledge, and that I am authorized to make this certification on behalf of:

Jurisdiction Name <b>City of Adelanto</b>	County <b>San Bernardino</b>		
Authorized Signature	Title <b>Special Projects Director</b>		
Type/Print Name of Person Signing <b>David Crandell</b>	Date <b>8-Oct-01</b>	Phone (   ) Include Area Code <b>(760) 246-2300 Ext 3034</b>	
Person Completing This Form (please print or type) <b>Rose Institute, Claremont McKenna College - Dr. Steve Frates</b>	Title <b>Project Coordinator (909) 621-8159</b>		
Affiliation: <b>Assisted by Paul Ryan (909) 288-5049 and other staff and students</b>			
Mailing Address <b>11600 Air Base Road</b>	City <b>Adelanto</b>	State <b>CA</b>	ZIP Code <b>92301</b>
E-mail address			

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**Section II: Information for New Generation-Based Study for Existing or New Base Year****Attach additional sheets if necessary— reference each response to the appropriate cell number (e.g., 4).***Note: New base years must be representative of a jurisdiction's disposal and diversion.*

1. Current Board-approved existing base-year:	2. Proposed new generation-based study year:
1990	1999
3. Explain how the proposed generation study year is representative of average annual jurisdiction disposal and diversion:	
<p>The 1999 Base Year used here is entirely calculated using data gathered by the City. All data used to calculate the new base-year generation uses actual tonnages from existing programs, disposal data provided by the landfills, and business survey information that is not extrapolated. There were no unusual program changes or discrepancies in the disposal reporting during the 1999 year. The 1999 generation can be defined as "typical" because the City implemented its programs over several years and no major program changes are anticipated. It is anticipated that the City of Adelanto will continue to promote and improve its existing programs, thus increasing the amount of diversion.</p>	

**4. Enter your diversion rates below.**

Diversion rate calculated using existing base year	a. -73 %	Diversion rate calculated using new generation-based study	b. 39 %
For existing base year pounds/person/day based on generation	4.1	For new generation based study pounds/person/day based on generation	10.1
Residential generation 78 %      Non-Residential Generation 22 %		Residential generation 61% %      Non-Residential generation 39% %	
Population existing generation-based study	6,791	Population new generation-based study	15,600

5. If there is an increase between 4a and 4b, please explain how the new diversion rate is consistent with your current diversion implementation efforts. If the proposed new generation tonnage results in an increase in your pounds/person/day, please explain how this is consistent with your current diversion implementation efforts and provide any examples, e.g. change in jurisdiction's demographics.

The City of Adelanto has one (1) franchise collection system in place. Residential comingled waste collection is collected by Burtec Waste Industries and recyclables are processed at the Victorville MRF. The City and Burtec have a commercial diversion program in place. Further, the City has an active community clean up and recycling program, using prison labor, that recycles all construction and demolition debris and roadside litter. When comparing the pounds/person/day there is an increase from 4.1 pounds/person/day in 1990 to 10.1 pounds/person/day 1999. This higher amount generated reflects the industrialization of the City and is consistent with the existing economy of the area, the increased square footage of new businesses and manufacturing facilities, and a recognized group quarters population increase at the private prisons.

6. If the difference between the proposed diversion rates in 4a and 4b is greater than 5 percentage points, please explain the specific reasons for the difference. (For example: new/improved curbside diversion programs.)

The 1990 Solid Waste Generation Study (SWGS) was prepared through the Desert and Mountain Coalition of San Bernardino County. This group included seven (7) cities and the County of San Bernardino. The SWGS was prepared prior to the rapid expansion of residential and non residential development in the City of Adelanto. Therefore, the results used to calculate the 1990 base-year could not predict the actual waste generated when economic development occurred. The 1999 Base-Year Revision Waste Generation Study has included close hauler coordination, landfill coordination and commercial waste audits. This accounting of program participation indicates what is actually occurring within the City of Adelanto on a daily basis and has increased the diversion rate to a level that reflects Adelanto's program implementation.

7. Disposal Tonnage: (enter values)	11788	5806	17594
	Residential	Non-Residential	Total
Please select the ONE choice below that best explains your disposal data and complete the required tables.			
<input checked="" type="checkbox"/> a. All tons claimed are from the Board's Disposal Reporting System (No explanation required. Go to Section 8.)			
<input type="checkbox"/> b. All tons claimed are from a 100 percent audit of hauler and self-haul tonnage. (Please complete Reporting Year Tonnage Request and Modification Certification sheet found at <a href="http://www.ciwmb.ca.gov/gcentral/forms/rthmdq.doc">http://www.ciwmb.ca.gov/gcentral/forms/rthmdq.doc</a> )			
<input type="checkbox"/> c. Some Disposal Reporting System data were corrected. (Please complete Reporting Year Tonnage Modification Request and Certification sheet found at <a href="http://www.ciwmb.ca.gov/gcentral/forms/ytmdq.doc">http://www.ciwmb.ca.gov/gcentral/forms/ytmdq.doc</a> )			

8. In the table below, list the summarized diversion activities, and diversion data records that support your claim and are available for Board audit. (Note: The Board expects the jurisdictions to be able to provide all back-up documentation, if requested). Include type of record and location—for example, weight tickets from transfer stations. This section should capture all diversion tonnage (from will perform all addition calculations). If any diversion is from restricted wastes, agricultural wastes, inert solids (e.g., concrete, asphalt, dirt, etc.), white goods, and scrap metal please identify those programs/waste types and fill out section 10. Please mark as Attachment 8 all copies of survey forms.
- \*Please provide detailed Non-Residential waste information in Section 9.

\*Please provide detailed non-Residential waste audit information in Section 9

Note: The Board has indicated that it will be scrutinizing total source reduction amounts greater than 5% of total generation. Please be prepared to provide additional details substantiating your claim.		Specific diversion factor used (if any) and Source Type of record and location of record	
Disposal Activity	Actual tons	Relative Percent to Total Generation	Specific diversion factor used (if any) and Source
Please use the Board's program types			
The program type diversity is online at: <a href="http://www.ciwmb.ca.gov/gcentral/forms/rthmdq.doc">http://www.ciwmb.ca.gov/gcentral/forms/rthmdq.doc</a>			
Residential Activities			
Backyard composting	0	0.0%	n/a
Grass recycling	0	0.0%	n/a
Other Residential Solid Waste Reduction (e.g. paper, plastic, metals, glass, wood, etc.)			
Enter program name	0	0.0%	n/a
Enter program name	0	0.0%	n/a
Enter program name	0	0.0%	n/a
Enter program name	0	0.0%	n/a
Enter program name	0	0.0%	n/a
Residential Residential Solid Waste Reduction	0	0.0%	
Commercial/Industrial Recycling	0	0.0%	
Current Recycling			
Buyback centers	754	2.6%	Aluminum, cardboard, glass, HDPE, mixed paper, newspaper, PETE, scrap metal, office paper, wood
Drop-off centers	0	0.0%	n/a
			Actual MRF tonnage

Scale records and other MRF records (see attachment in section #9)  
3.52

Division Activity		Actual hours	Results & Recycled to Specific material (specify) [List operation which multiple materials in one box]	Specific contribution (check one used (if any) and/or source)	Type of report and location of record
Please list the Board's program types. This program type glossary is online at <a href="http://www.epa.gov/epaoswer/non-haz/contaminants/glossary.html">www.epa.gov/epaoswer/non-haz/contaminants/glossary.html</a>					
<b>Other Residential recycling (list each program separately)</b>					
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
<b>Residential Recycling</b>		<b>751</b>	<b>2.8%</b>		
<b>Residential Composting</b>		<b>0</b>	<b>0.0%</b>	na	
<b>Green Waste drop-off</b>		<b>0</b>	<b>0.0%</b>	na	
<b>Curtisville Green Waste</b>		<b>0</b>	<b>0.0%</b>	na	
<b>Christians Tree Program</b>		<b>0</b>	<b>0.0%</b>	na	
<b>Other Residential composting (list each program separately)</b>					
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
<b>Subtotal Residential Composting</b>		<b>0</b>	<b>0.0%</b>		
<b>Subtotal Residential Recycling</b>		<b>751</b>	<b>2.8%</b>		
<b>Non-Residential Recycling</b>		<b>0</b>	<b>0.0%</b>		
<b>Non-Residential Wash Audit</b>		<b>4</b>	<b>0.0%</b>		
<b>Other Non-Residential Pollution Reduction</b>		<b>0</b>	<b>0.0%</b>		
<b>Program Maintenance</b>					
<b>Double Sided Copying</b>		<b>5</b>	<b>0.0%</b>	Ledger paper	
<b>Toner cartridge reuse</b>		<b>0</b>	<b>0.0%</b>	Toner and printer cartridges	
<b>Grasscycling</b>		<b>53</b>	<b>0.0%</b>	Mulch mowing at government facilities	
Enter program name		0	0.0%	na	
Enter program name		0	0.0%	na	
<b>See Section 9</b>					
<b>See Section 9</b>					
<b>See Section 9</b>					
<b>City Survey Questionnaire</b>					
<b>City Survey Questionnaire</b>					
<b>City acreage records and park maintenance records</b>					

Diversions/Activity	Actual tons	Materials Recycled to Total Generation	Specific materials (specify) / List operation which shall materials for one box)	Specific construction factor used (if any) and Source	Type of record and location of record
Please use the Board's program types. The program type glossary is phine at http://www.wasteaudit.org/Programs/Programs.html					
Residential Recycling	4608	16.7%			See Section 9
Non-Residential Waste Audit					See Section 9
Other Non-Residential recycling (not audit program separately)					See Section 9
Municipal programs	9	0.0%	Leaves, grass, prunings, wood including pallets	Actual tonnage	Scale records and other city records (see attachment in section #9)
MRF Processing	436	1.5%	Cardboard, mixed paper, newspaper, scrap metal, wood, concrete	Actual MRF tonnage	Scale records and other MRF records (see attachment in section #9)
Enter program name	0	0.0%	n/a		
Enter program name	0	0.0%	n/a		
Subtotal Non-Residential Recycling	2251	18.1%			
Disposition	0	0.0%			See Section 9
Non-Residential Waste Audit	0	0.0%			See Section 9
Other non-Residential commercial (not audit program separately)					See Section 9
Enter program name	0	0.0%	n/a		
Enter program name	0	0.0%	n/a		
Enter program name	0	0.0%	n/a		
Enter program name	0	0.0%	n/a		
Subtotal Non-Residential Disposition	5314	18.5%			
Enter residential Residential Diversions/Activities					Scale records and other city records (see attachment in section #9)
ADC	0	0.0%	n/a		Scale records and other city records (see attachment in section #9)
Sludge	1570	5.5%	Sludge	Actual tonnage	Scale records and other city records (see attachment in section #9)
Scrap metal	20	0.1%	White Goods	Actual tonnage	Scale records and other city records (see attachment in section #9)
Construction and demolition	3455	12.0%	Rocks, concrete and asphalt	Actual tonnage	
Landscape salvage	0	0.0%	n/a		
Subtotal Residential Non- Residential diversion	5044	17.9%			
Total Non-Residential Source Reduction Tons	61	0.2%			
Total Diversions Tons	11112	38.7%			
Total Disposed Tons from Sec. 7	17394	61.3%			
Total Generation Tons (Div+Disp)	2808				
Diversion Rate	38%				

## 9. Specific Non-Residential Sector Waste Audits-Top 10 Non-Residential Generators

Please complete this table for the top 10 non-residential generators that were surveyed. List each non-residential generator separately from largest to smallest, based on 'total diversion tons'. Audit reference number ties to your audit sheets.

(Form will perform all addition calculations).

Please provide an attachment 9 which includes all of the generators surveyed. Include for each generator (use type of generator in lieu of specific business name) diversion activity and material type and associated tonnage for each diversion activity/material type, and applicable conversion factors/sources. Include copies of survey form(s) used.

Type of Non-Residential Generator	Audit Reference Number	Specific/Major Diversion Activities include: material type (e.g. paper recycling, grasscycling) (List activities on one line)	Source Reduction Tons	Recycling Tons	Composting Tons	Total Diversion Tons	Percent of Total Generation (% Total Diverision)	Survey Method Phone (P) Mail (M) On-site (O) Other _____
Municipality	19	White Goods; Leaves, grass, and prunings; wood waste including pallets, C&D, sludge	61	5049		5110	17.8%	O,P,M
Concrete Batch Plant	83	Concrete		3005		3005	10.5%	P
Manufacturing	20	Industrial process steel scrap		1800		1800	6.3%	P
MRF	12	Cardboard, mixed paper, newspaper, scrap metal, wood, concrete/asphalt Grasscycling, double sided copies (Recycling tonnage in MRF #s)	436			436.28	1.5%	O,P,M
Private Prison	4		3			2.57	0.0%	O,P
Manufacturing	42	Ferrous metals	3			2.5	0.0%	P
Private Prison	1	Note pad paper use (Recycling tonnage in MRF #s)	0			0.3	0.0%	O,P
Manufacturing	167	Double sided copying	0			0.3	0.0%	P
Manufacturing	56	Double sided copying	0			0.3	0.0%	P
Private Prison	90	Toner cartridges	0			0.25	0.0%	O,P
		Totals	64.72	10292.78		10357.5	36.1%	

Summarize the non-residential diversion activities for the top 10 generators quantification methodology, and applicable conversion factors and sources. (e.g. Cardboard recycling: quantified by monthly tonnage receipts provided by the contact person at the business)

The audits focused on the larger commercial businesses based on the CIWMB stratified sample selection and targeting methodology described in the CIWMB Uniform Waste Characterization Method and CIWMB Guide for Conducting A Diversion Study. A follow-up phase focused on the statistical strata consisting of small and medium sized businesses. Preliminary statistical analysis indicates that a sample size of approximately 40 randomly selected businesses is more than adequate to provide a statistically significant diversion rate for the non-residential sector. The survey was completed by the Rose Institute of Claremont McKenna College in the spring of 2000 and submitted to the CIWMB in the summer of 2000. The non-extrapolation quantification methodology for estimating source reduction diversion quantities is based upon a draft USEPA document titled "Business Waste Prevention Quantification Methodologies, Business Users Guide and Technical Appendices," and CIWMB Diversion Study Guide. All of the conversion factors used are from CIWMB references noted in the April 2001 agenda item approving the Diversion Study Guide. Actual tonnage is used where possible throughout. When tonnage was estimated, 100% enumeration occurred before specific conversion factors were applied.

QUANTIFICATION EXPLANATIONS:

PAPER

Cardboard Recycling:

Business 12: The MRF recycled 65 tons of cardboard. Tonnage information is reported from weigh tickets and monthly reports.

Mixed Paper Recycling:

Business 12: The MRF recycled 22 tons of mixed paper. Tonnage information is reported from weigh tickets and monthly reports.

Newspaper recycling:

Business 12: The MRF recycled 15 tons of newspaper. Tonnage information is reported from weigh tickets and monthly reports.

METALS

Ferrous Metals

Business 12: The MRF recycled 3 tons of ferrous metals and tin cans. Tonnage information is reported from weigh tickets and monthly reports.

Business 20: The business recycled 1,800 tons of industrial process scrap. Tonnage information is reported from company records and weigh tickets.

Business 42: The business recycled 2.5 tons of ferrous metals. Tonnage information is reported from company records and weigh tickets.

White Goods

Business 19: The municipality recycled 20 tons of white goods - weigh tickets and records at City offices.

YARD WASTE

Business 19: The municipality processed 4.47 tons of leaves, branches, and prunings. Tonnage information is reported from City records.

OTHER ORGANICS

Wood Waste Including pallets

Business 12: The MRF recycled 317.6 tons of wood waste, including pallets. Tonnage information is reported from weigh tickets and monthly reports.

Business 19: The municipality recycled 4.47 tons of wood waste, including pallets. Tonnage information is reported from weigh tickets and City records.

INERT SOLIDS

Rocks, Asphalt, Concrete, and Brick

Business 19: The municipality recycled 3,455 tons of concrete and asphalt through the city public works/prisons programs. Tonnage information from City records.

Business 12: The MRF recycled 13.52 tons of concrete and asphalt. Tonnage information is reported from weigh tickets and monthly reports.

SPECIAL WASTES

10. For each restricted waste type [i.e., agricultural waste, inert solids, (e.g. concreter, asphalt, dirt, etc.) scrap metals and white goods (PRC Section 41781.2)] and associated program, please provide the following information:

a. If the diversion program started on or after January 1, 1990, complete the following table.

(Note: program name refers to one specific diversion program for that waste type; (e.g., diversion conducted by City Public Waste Dept).

Restricted Waste Type	Specific Program name	Year started	Tonnage
Inert Solids	Concrete and asphalt collection by City and MRF	1997	3763
White Goods	Special white goods collection by City	1997	20
Scrap Metal	Scrap Metal collection by MRF collection	1997	3
Pull Down for Waste Types			
Pull Down for Waste Types			
Pull Down for Waste Types			

b. If the diversion program started before January 1, 1990, on a separate sheet, marked attachment 10b, provide the following documentation: (Note: If documentation for a waste type and program has already been approved by the Board, you do not have to provide an attachment 10b for that waste type and program.

Instead please provide date of Board approval of previously submitted information. \_\_\_\_\_ (Date)

If documentation is not available, go to 10d.

- How the diversion was the result of a local action taken by the jurisdiction, which specifically resulted in the diversion [PRC Sec. 41781.2 (c) (1)].

- That the amount of that waste type diverted from the jurisdiction in 1990 was less than or equal to the amount of that waste type disposed at a permitted disposal facility by the jurisdiction in any year before 1990.

(Note: this criterion is applicable to the entire jurisdiction, not to individual programs [PRC Sec. 41781.2 (c) (2)]). Please include documentation.

- The jurisdiction is implementing, and will continue to implement, the diversion programs in its Source Reduction and Recycling Element.

c. If the diversion program started before January 1, 1990, and the documentation requested in 10b is available (but not yet approved by the Board), complete the table below for each program claimed:

Restricted Waste Type	Specific Program Name	New base year or reporting year diversion tonnage
Pull Down for Waste Types		
Pull Down for Waste Types		
Pull Down for Waste Types		
Pull Down for Waste Types		
Pull Down for Waste Types		

d. If the diversion program started before January 1, 1990, and the documentation requested in 10b is not available, please complete the table below for each program claimed. (Note: Only the difference between the new base year/reporting year and 1990 can be counted in the diversion rate calculation.)

Restricted Waste Type	Specific Program name	New base year or reporting year tonnage	1990 diversion tonnage	Difference
Pull Down for Waste Types				
Pull Down for Waste Types				
Pull Down for Waste Types				
Pull Down for Waste Types				
Pull Down for Waste Types				
Pull Down for Waste Types				

Board Meeting  
April 16-17, 2002  
Attachment 9

CEC 177 CCR 2002

Agenda Item  
Attachment 2a

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Total Non Business (Government) Tonnage 5,546

City of Adelanto Total Diversion Tonnage 10,358

Audit Diversion for the City of Adelanto

Reference Number	Business Type	Diversion Activity	Material Type	Conversion Factor and Source	Tons
83	Concrete Batch Plant	Recycling	Rocks, concrete, bricks, and asphalt	Tonnage from company records	3,000
		Recycling	Other recycling	Tonnage from company records	5.28
20	Manufacturing	Recycling	Industrial process waste	Tonnage from company records	1,800
1	Private Prison	S-Reduction	Paper use for note pads	Tonnage from survey questionnaire	0.3
42	Manufacturing	Recycling	Ferrous metal/tin cans	Tonnage from company records	2.5
4	Private Prison	S-Reduction	Double sided copying	1 ream (500 sheets) = 5 lbs (USEPA)	0.3
		S-Reduction	Grasscycling	350 lbs/1,000 sq ft/year (USEPA)	2.27
167	Manufacturing	S-Reduction	Double sided copying	1 ream (500 sheets) = 5 lbs (USEPA)	0.3
56	Manufacturing	S-Reduction	Double sided copying	1 ream (500 sheets) = 5 lbs (USEPA)	0.3
90	Private Prison	S-Reduction	Double sided copying	1 ream (500 sheets) = 5 lbs (USEPA)	0.1
		S-Reduction	Toner cartridges	2.5 lbs each (USEPA)	0.25

Total Business Diversion Tonnage 4,812

Reference Number	Business Type	Diversion Activity	Material Type	Conversion Factor and Source	Tons
19	Municipality	Recycling	White goods	Actual tonnage from city records	19.70
		Recycling	Leaves, grass, and prunings	Actual tonnage from city records	4.47
		Recycling	Wood waste including pallets	Actual tonnage from city records	4.47
		Recycling	Rocks, concrete, brick and asphalt	Actual tonnage from city records	3,455.00
		Recycling	Sludge, fertilizer, and soil amendments	Actual tonnage from city records	1,569.50
		S-Reduction	Double sided copying	1 ream (500 sheets) = 5 lbs (USEPA)	4.50
		S-Reduction	Toner cartridges	2.5 lbs each (USEPA)	0.06
		S-Reduction	Grasscycling	350 lbs/1,000 sq ft/year (USEPA)	52.50
				Total Diversion by Municipality	5,110.20
12	MRF	Recycling	Cardboard	Actual tonnage from MRF	65.19
		Recycling	Mixed paper	Actual tonnage from MRF	21.65
		Recycling	Newspaper	Actual tonnage from MRF	15.45
		Recycling	Ferrous metal/tin cans	Actual tonnage from MRF	2.87
		Recycling	Wood waste including pallets	Actual tonnage from MRF	317.6
		Recycling	Rocks, concrete, brick, and asphalt	Actual tonnage from MRF	13.52
				Total Diversion by MRF	436.28

Sludge

**Business 19:** The municipality recycled 1,569.50 tons of sludge. Actual tonnage was measured and recorded on weigh slips by Recyc.

**SOURCE REDUCTION**

**Double Sided Copying**

**Business 19:** The municipality reduced the use of paper by 4.5 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA).

**Business 4:** The business reduced the use of paper by 0.3 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA).

**Business 34:** The business reduced the use of paper by 0.02 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA) and the use of 15 reams @ 50% double sided.

**Business 167:** The business reduced the use of paper by 0.3 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA).

**Business 56:** The business reduced the use of paper by 0.3 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA).

**Business 90:** The business reduced the use of paper by 0.3 tons, based on using the conversion factor - a ream (500 sheets of paper) = 5 lbs (USEPA).

**Grasscycling**

**Business 19:** The municipality mulch mows 76.88 acres of parklands, lawns, street escapes, etc. for a total of 52.5 tons of grass mulch. The conversion factor used for this calculation is 350 lbs/1,000 sq ft/year of lawn (USEPA).

**Business 4:** The prison mulch mows less than a third of an acre of lawn for a total of 2.27 tons of grass mulch. The conversion factor used for this calculation is 350 lbs/1,000 sq ft/ year of lawn (USEPA).

**Other Reuse**

**Businesses 19 and 90:** These businesses reused 0.31 tons of toner cartridges. The tonnage was calculated using 2.5 lbs/unit (USEPA).

**Business 1:** The prison reused 0.3 tons paper as scratch pads for inmates to write on. Tonnage estimated from survey questionnaire.